

**Remarks**

Examiner Lepisto is thanked for the thorough Office Action.

**In the Drawings**

The Examiner is requested to approve the changes to Fig. 7 in the substitute drawing sheet 4/6 submitted herewith. That is, the script overwriting the word "Waveguide" has been removed.

Applicant respectfully disagrees with the Examiner re labeling some of the Figures as "Prior Art" vis a vis "common" at page 7 of the specification as filed. Applicant specifically states in the specification at page 7, before the use of the word "common":

Figs. 1 to 6 illustrate a method and simulations conducted by the inventors for stress modeling and are not to be considered as prior art against the present invention.

Further, the section header at page 6 prefacing the above statement clearly states:

Method/Problem Known to the Inventors - Not to be Considered Prior Art for the Purposes of the Present Invention

**In the Drawings**

Enclosed is substitute drawing sheet 4/6 with changes to Fig. 7, that is the script overwriting the word "Waveguide" has been removed so that the word "Waveguide" may be easily read. Approval of these drawing changes is respectfully requested.

Docket: HTIRC 02 - 012

S/N: 10/619,241

Clearly, none of the Figures are prior art and therefore none need be labeled as such.

**In the Specification**

The specification has not been amended.

Applicant respectfully disagrees with the Examiner's objection to the specification regarding the use of the statement "Not to be considered prior art for the purposes of the present invention" on pages 6 and 7 and elsewhere as it may be present. The Examiner states "[t]his is not a valid or appropriate statement for applications." Applicant is aware of no requirement to this effect and respectfully urges that such a statement, or words to that effect, can be valid and appropriate, and in the instant specification are valid and appropriate, and requests the Examiner remove this objection.

Applicant further respectfully disagrees with the Examiner that any of the Figures as filed need be labeled as "Prior Art" or the like. Applicant specifically states in the specification at page 7, before the use of the word "common":

Figs. 1 to 6 illustrate a method and simulations conducted by the inventors for stress modeling and are not to be considered as prior art against the present invention.

Further, the section header at page 6 prefacing the above statement clearly states:

Method/Problem Known to the Inventors - Not to be Considered Prior Art for the Purposes of the Present Invention

Clearly, none of the Figures are prior art and therefore none need be labeled as such.

Applicant is not aware of any requirement that the lines must be "labeled throughout the specification." Applicant respectfully requests that this objection be withdrawn.

(The objections to claims 1, 20 and 38 are addressed in the Claims section below.)

Applicant requests that the Examiner's objections specific to the specification be withdrawn.

In the Claims

Independent claims 1, 20 and 38 have been editorially amended so the sub-paragraphs starting with "partially into the underclad..." are not indented under "patterning" as requested by the Examiner. These respective amendments do not narrow the respective claims and are not related to patentability.

Dependent claims 12, 30 and 48 have been amended to correct a typographical error as is evident from the specification as filed, i.e. "GaAS." has been replaced with the correct -- GaAs -- at the third line of each claim.

Claims 56 to 91 to are new and have been added to better encompass the full scope and breadth of the invention notwithstanding the patentability of the original claims. Claims 56 to 73 are new method claims and claims 74 to 91 are new structure claims.

### **Claim Rejections**

**The Rejection Of Claims 1 To 3, 6, 10 To 13, 16 To 18, 20 To 22, 25, 29 To 31, 34 To 36, 38, 39, 40, 46 To 49 And 52 To 54 Under 35 U.S.C. §102(e) As Anticipated By Won et al. (U.S. Patent No. 6,542,687).**

The rejection of claims 1 to 3, 6, 10 to 13, 16 to 18, 20 to 22, 25, 29 to 31, 34 to 36, 38, 39, 40, 46 to 49 and 52 to 54 under 35 U.S.C. §102(e) as anticipated by Won et al. (U.S. Patent No. 6,542,687) (the '687 Won Patent) is acknowledged.

**The Rejection Of Claims 4, 5, 7 To 9, 14 To 17, 19, 23, 24, 26 To 28, 32 To 35, 37, 41 To 45, 50 To 53 And 55 Under 35 U.S.C. §103(a) as Being Unpatentable Over Won et al. (U.S. Patent No. 6,542,687).**

The rejection of claims 4, 5, 7 to 9, 14 to 17, 19, 23, 24, 26 to 28, 32 to 35, 37, 41 to 45, 50 to 53 and 55 under 35 U.S.C. §103(a) as being unpatentable over Won et al. (U.S. Patent No. 6,542,687) (the '687 Won Patent) is acknowledged.

Applicants' wish to briefly point up the claimed features of their invention which are believed to be not shown nor obvious from the teachings of known references in this field. The claims all clearly define A method of forming a waveguide, comprising the steps of: providing a structure; forming an underclad layer over the structure; forming a core layer over the underclad layer; and patterning: the core layer to form the waveguide; and partially into the underclad layer, forming an overetched underclad layer having a projection underneath the waveguide; the waveguide having stress gradients and the overetched underclad layer having stress gradients.

The '687 Won Patent discloses a method of making a polarization insensitive optical waveguide structure.

Claims 1 to 3, 6, 10 to 13, 16 to 18, 20 to 22, 25, 29 to 31, 34 to 36, 38, 39, 40, 46 to 49 and 52 to 54 distinguish over the '687 Won Patent under §102(e) because Won does not disclose the combination of limitations as claimed in these claims.

For example, Won does not disclose independent claim 38's limitation (and hence claims 39, 40, 46 to 49 and 52 to 54 depending therefrom) "patterning: ... partially into the underclad layer about one-half of its width...". The Examiner only cites "Figures 3-5" of Won to support that it discloses "and partially into the underclad layer (312, 412, 512) about one-half of its width (Figures 3-5), forming an overetched underclad layer (312, 412, 512) having a projection underneath the waveguide;". Applicant urges that it is clear that Figures 3-5 do not fairly disclose this limitation.

Claims 4, 5, 7 to 9, 14 to 17, 19, 23, 24, 26 to 28, 32 to 35, 37, 41 to 45, 50 to 53 and 55 distinguish over the '687 Won Patent under §103(a) for the above reasoning re the Examiner's citation of the Figures 3-5 of Won vis a vis the "patterning ... partially into the underclad layer about one-half of its width" limitation and further because, inter alia: the prior art lack a suggestion that the reference should be modified in a manner required to meet the claims; up to now those skilled in the art never appreciated the advantage of the invention, although it is inherent; the Examiner has made a strained interpretation of the reference that could be made only by hindsight; and the Examiner has not presented a convincing line of reasoning as to why the claimed subject matter as a whole, including its differences over the prior art, would have been obvious.

These above arguments also apply to new claims 56 to 91.



Therefore claims 1 to 91 are submitted to be allowable over the cited references and reconsideration and allowance are respectfully solicited.

**CONCLUSION**

In conclusion, reconsideration and withdrawal of the rejections are respectively requested. Allowance of all claims is requested. Issuance of the application is requested.

It is requested that the Examiner telephone Stephen G. Stanton, Esq. (#35,690) at (610) 296 - 5194 or the undersigned attorney/George Saile, Esq. (#19,572) at (845) 452 - 5863 if the Examiner has any questions or issues that may be resolved to expedite prosecution and place this Application in condition for Allowance.

Respectively submitted,

A handwritten signature in black ink, appearing to be 'SBA', is written over a horizontal line.

Stephen B. Ackerman  
Reg. No. 37,761